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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,237	12/01/2003	Paul Adams	BIC-021	1938
29626 7590 03/08/2007 THE H.T. THAN LAW GROUP WATERFRONT CENTER SUITE 560 1010 WISCONSIN AVENUE NW WASHINGTON, DC 20007			EXAMINER MAPLES, JOHN S	
			ART UNIT 1745	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/08/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/725,237

Applicant(s)

ADAMS ET AL.

Examiner

John S. Maples

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-102 ~~is~~ are pending in the application.
- 4a) Of the above claim(s) 25-102 ~~is~~ are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 ~~is~~ are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                       |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.                                                |

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-24, drawn to a first fuel supply, classified in class 429, subclass 22.
  - II. Claims 25-26, drawn to a second fuel supply, classified in class 429, subclass 23.
  - III. Claims 27-39, drawn to an information storage device, classified in class 429, subclass 22.
  - IV. Claims 40-83, drawn to a fuel cell system, classified in class 429, subclass 34.
  - V. Claims 84-95, drawn to a filter, classified in class 429, subclass 34.
  - VI. Claims 96-102, drawn to an ion gauge/method, classified in class 324, subclass 459.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the

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particulars of the subcombination as claimed because the fuel supply does not require the fuel liner. The subcombination has separate utility such as for use in providing fuel for a gasoline powered car.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Inventions I/II and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the fuel supply does not require the hot swap limitations. The subcombination has separate utility such as for use in providing fuel for a gasoline powered car.

Inventions IV and I/II/III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as

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claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the fuel cell does not require the encrypted data, the refilling device nor the hot swap limitations. The subcombination has separate utility such as for use in providing fuel for a gasoline powered car.

Inventions I-IV and V and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions have different designs and modes of operation. A filter is materially different than any of the Groups I-IV limitations. Also, the ion gauge is distinct from the filter of Group V and the fuel cell supplies and fuel cell of Groups I-IV.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with H. T. Than on February 7, 2007 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-24. Affirmation of this election must be made by applicant in replying to this

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Office action. Claims 25-102 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 8, 12, 13, 15, 16, 19, 21, 22 are rejected under 35 U.S.C. 102(e) as being anticipated by either Bullock et al.-US 2003/0082426 ('426) or Bullock et al.-US 2003/0082416. ('426)

Reference is made to paragraphs 28, 35-43, 50-56 of both '426 and '416 and the drawing figures of both publications. These portions disclose a fuel cell system including an information device 200 that is supported on a fuel supply for a fuel cell. Paragraph 40 sets forth some of the data stored by the information device, which information includes intellectual property information as required by claim 8. The

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system also includes a system controller 126 located in the electronic device 100. The fuel supply inherently includes a liner on the inside of the container. The fuel supply has the capability to be connectable to a pump as claim 19 requires. Paragraphs 41 and 42 set forth the controller utilizing a "password" so that unauthorized devices can not be utilized in the fuel cell system.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over '426 or '416, each taken in view of both Newman et al.-US 6,359,777 ('777) and Bullock et al.-US 2002/0154915. ('915)

The only claimed features not shown by either '426 or '416 is the encrypted data, the particular decoder and the particular type of memory. The '777 patent sets forth in

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the abstract and column 3, line 50 through column 4, line 16 an encryption device used with a fuel cell system. To thus utilize the encryption device of '777 in the fuel cell system of either '426 or '416 would have been obvious to one of ordinary skill in this art at the time the invention was made so that it would be difficult to access and utilize the information device for the fuel cell. The particular type of decoder would have been obvious for simplicity of design and function. The '915 publication sets forth in the Abstract and in paragraphs 12 and 23 an electrically erasable programmable read-only memory for a fuel supply. To thus incorporate the memory of '915 in the fuel cell system of either '426 or '416 would have been obvious so that the data may be easily saved, utilized and transmitted.

11. Claims 9-11, 14, 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over either '426 or '416, each taken in view of '915 and Prased et al.-US 2003/0138679. ('679)

The only claimed features not taught by either '426 or '416 are the particular type of memory, the controller location, the wireless connections and the pump. The '915 publication sets forth an electrically erasable programmable read-only memory for a fuel supply and includes wireless connections. To thus incorporate the memory of '915 in the fuel cell system of either '426 or '416 would have been obvious so that the data may be easily saved, utilized and transmitted. To also utilize the wireless connections of '915 in either '426 or '416 would have been obvious for ease of use. To locate the controller within the fuel cell would have been obvious so that there would be less space occupied by the fuel cell system and the same could be used in applications requiring



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smaller space. The '679 publication teaches a pump in paragraph 29 for pumping fuel to a fuel cell and to include the same in either '426 or '416 would have been obvious so that fuel would reach the fuel cell in a more expeditious manner.

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 7-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Lines 1 and 4 of claims 7 and 8, respectively, recite improper Markush terminology. The expression "a group" should read --the group--.

Claim 17 is rejected because the same is identical to claim 11.

Claim 18 is incorrect because the same sets forth the controller in the electronic device whereas claim 17, the claim on which this claim depends, sets forth the controller in the fuel cell.

Claims 9-16 and 19-21, dependent on claim 8, fall therewith.


14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sakai et al. teach a fuel cell system including a fuel cartridge with memory of interest.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Maples whose telephone number is 571-272-1287. The examiner can normally be reached on Monday-Thursday, 6:15-3:45, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
JOHN S. MAPLES  
PRIMARY EXAMINER

JSM/2-26-2007